Commonwealth of Kentucky
Division for Air Quality

PERMIT APPLICATION SUMMARY FORM

Completed by: Herbert Campbell

General Information

Name:	Jim Beam Brands Co.
Address:	1600 Lebanon Junction Road, Boston, Kentucky 40107
Date application received:	April 5, 2004
SIC/Source description:	2085/Distillery
AFS(10-digit) Plant ID:	21-179-00014
EIS #:	102-3000-0014
Application log number:	56466
Permit number:	V-03-009 R1

Application Type/Permit Activity

[ ] Initial issuance
[X] Permit modification
__Administrative
__Minor
_X_Significant
[ ] Permit renewal
[ ] General permit
[ ] Conditional major
[X] Title V
[X] Synthetic minor
[ ] Operating
[X] Construction/operating

Compliance Summary

[ ] Source is out of compliance
[ ] Compliance certification signed
[ ] Compliance schedule included

Applicable Requirements list

[ ] NSR
[ ] PSD
[X] Netted out of PSD/NSR
[X] NSPS
[ ] NESHAPS
[X] Not major modification per 401 KAR 51:017, 1(23)(b) or 51:052,1(14)(b)
[X] SIP
[ ] Other

Miscellaneous

[ ] Acid rain source
[ ] Source subject to 112(r)
[X] Source applied for federally enforceable emissions cap
[ ] Source provided terms for alternative operating scenarios
[ ] Source subject to a MACT standard
[ ] Source requested case-by-case 112(g) or (j) determination
[ ] Application proposes new control technology
[X] Certified by responsible official
[X] Diagrams or drawings included
[ ] Confidential business information (CBI) submitted in application
[ ] Pollution Prevention Measures
[ ] Area is non-attainment (list pollutants):

Emissions Summary

Pollutant	Actual (tpy)	Potential (tpy)
PM	505.60	1,819.57
SO_2	197.07	1,244.31
NOx	82.29	269.61
CO	66.97	128.99
VOC	1,903.9	2,209.32
LEAD	0.020	0.043

SOURCE PROCESS DESCRIPTION

The source is a distillery that makes distilled spirits. Grain is unloaded and conveyed to hammermills where it is ground. The grain is fed into mash cookers along with water, and the grain starches are converted to sugars by heating. The cooked grain/water mixture is fed into fermenter vessels as a batch operation to convert the sugars to ethanol. After an appropriate residence time, the mixture is processed through distillation columns and condensers. The condensed liquid is fed to spirits tanks and then gauged at the cistern tanks prior to barrel filling. The spent stillage is then dried with a ring dryer and put into a storage room. Whiskey from the cistern tanks is put into barrels until the appropriate age is reached. The barrels are then gravity dumped, rolled, and rinsed at the dumping station. After dumping, the whiskey is fed to the regauge tanks, where it may be processed and sent to be loaded for shipment.

Comments:

The Distillery is proposing a significant revision to their Title V permit No. V-03-009. The projected emissions increases from the modification would exceed Prevention of Significant Deterioration (PSD) regulations. However, they propose to accept an operating limitation in order to "cap-out" of PSD requirements. The following modifications are proposed.

Emission Unit	Ky EIS ID	Emission Unit Description	Process Modification
03	03-001	Spent Stillage: tanks, certrifuges, evaporators	Relocate centrifuges & tanks to new dryhouse. Install larger evaporator.
04	03-002	Spent grain drying	Replace existing dryer with natural gas dryer and cyclone collectors.
04	03-003	Spent grain drying	Replace existing Aerator Cyclone with Distiller's Dried Grains (DDGS) Product Cyclone with Baghouse.

05	03-004	(DDGS) Silos & Process Cyclones	Construct 2 silos with cyclones and common baghouse. Relocate 1 silo and cyclone. Remove 2 existing silos.
05	03-005	DDGS Loading	Replace existing DDGS loading equipment with new (conveyors, etc.)
06	04-002	Barrel Aging	Remove existing Warehouse N. Construct 4 new warehouses over next 2 years. Warehouse X,Y & Z - 2004 Warehouse AA - 2005
07	005-01	Fuel Storage	Remove existing #6 Fuel Oil tank. Use existing (2) Propane tanks as back Up fuel source.
07	005-02	Indirect heat exchanger	Remove existing #6 Fuel Oil boilers (2). Install (1) new natural gas indirect heat exchanger.
08	005-03	Indirect heat exchanger	Remove existing #6 Fuel Oil boilers (2). Ky EIS 005-03 eliminated.

The net emissions increases from the process modifications are shown in Table A-1 for each criteria pollutant. Based on this analysis (Projected Potential-to-Emit minus Baseline Actual Emissions), PSD emission increase thresholds are exceeded for VOC & NOx. Note that the increases are prior to imposing requested operating limitation.

Table A-1 PSD Net Emission increase Thresholds (tons per year)

		VOC	CO	NOx	SO2	PM	PM10
Emission Unit 03	Tons/ yr	58.86	0.0	0.0	0.0	0.0	0.0
Emission Unit 04	Tons/ yr	43.64	33.07	2.69	.07	10.21	10.21
Emission Unit 05	Tons/ yr	0.0	0.0	0.0	0.0	6.27	1.42
Emission Unit 07/08	Tons/ yr	2.15	35.03	81.69	.04	2.81	2.81
Total	Tons/ yr	104.65	68.09	84.38	.12	19.29	14.44

In order to avoid triggering PSD thresholds for the above listed criteria pollutants, Jim Beam is requesting an operating limitation. Based on the emissions inventory analysis, VOC and NOx are the first pollutants that trigger PSD thresholds. Therefore, operating limitations will be imposed that limit these emissions.

(These units were renumbered in accordance with the permittee's request.)
Unit 3 is Emission point 03-001 Spent Stillage
Unit 4 is Emission point 04-001 Spent Grain Drying
Unit 8 is Emission point 08-002 Indirect Heat Exchanger (88.85 mmBtu/hr N.G./Propane)
The facility's remaining production processes in the Title V permit are not changing.

EMISSION AND OPERATING CAPS DESCRIPTION:

This source is requesting that these production processes affected by this modification be limited for VOC and for NOx emissions to 35 tons each in any 12 month rolling total in order to ensure the non-applicability of 401 KAR 51:017 (PSD). The emission capping is for Emission units 3, 4, & 8.

The source will also demonstrate compliance with sulfur requirements by utilizing vendor certification.